



1. Introduction

1.1 In Germany, there are two categories of vocational education and training ("VET") comprising (a) dual-track VET requiring the trainees to practise apprenticeship and receive classroom teaching at the same time; and (b) school-based VET without workplace training. Dual-track VET is deemed to be highly effective in expediting the transition of youths from schools to work, and thus has caught global attention in the more recent years. For instance, G20 held a Ministerial Meeting in Guadalajara of Mexico in May 2012 to discuss VET and concluded that quality apprenticeships could boost youth employment.

1.2 In Germany, VET is open to all youths regardless of academic qualifications. Yet, it usually starts from graduates of lower secondary schools aged at around 15. These youths need to choose between two major pathways in their further study, either (a) general or academic education, or (b) vocational education. In 2012, 48% of the German teenagers took up the vocational stream, broadly similar to the respective figure of 52% in academic stream.

2. Dual-track vocational education and training system in Germany

2.1 The dual-track VET is the most common form of VET in Germany, taken up by three quarters of new trainees. Usually, dual-track VET trainees work for the enterprises for three to four days each week, and study in public vocational schools for one to two days per week. While 40% of the school work is in conventional subjects like languages, mathematics and sciences, 60% is in subjects directly related to the chosen profession, equipping trainees with both theoretical and practical knowledge. Apprenticeships usually last for two to three years, and trainees are certified as skilled workers after passing the state examination.

2.2 Apprenticeships straddled 329 occupations across manufacturing and service sectors in Germany in 2013. All stakeholders (i.e. government, trade associations, companies and trade unions) work closely together to ensure a large supply of workplace training places which can meet the professional standards and market needs. In 2013, 21% of German companies participated in the dual VET scheme, offering 564 200 apprenticeships for new trainees.

2.3 Contrary to the misconception that apprenticeship is a "second-class" career path in other places, apprenticeship is a well-respected pathway in Germany. The dual-track VET graduates have the following career options:

- (a) VET graduates are qualified as skilled workers after passing the examination and this qualification is recognized throughout the country. Each year about two-thirds of them manage to secure full-time employment from the same training firms upon graduation;
- (b) VET graduates can advance to master craftsmen (i.e. Meister) or similar qualifications in their professions, subject to further advanced vocational training provided by their respective business chambers and passing the Meister examination.¹ There were altogether more than 3 300 advanced vocational examinations in 2010. Further ahead, they can even ascend to managerial position in the companies, as many prominent celebrities, including former Chancellor Gerhard Schröder, started their careers from vocational training at the very beginning²; and
- (c) VET graduates can also pursue higher education in universities of applied sciences or other post-secondary institutes, leading to bachelor or even master degrees. Yet it is noted that not many VET graduates switch back to academic stream. In 2012, only 31% of youths were expected to graduate from academically oriented tertiary education in Germany, lower than the average figure of 38% seen in Organization for Economic Cooperation and Development ("OECD").

¹ Meister examinations are demanding. The candidates need to prove their capability in pursuing their profession independently, running their own business, and training apprentices.

² Gerhard Schröder was the Chancellor of Germany during 1998-2005. His career started from apprenticeship in retail sales during 1958-1961. While working as a sales clerk afterwards, he studied at evening school for a high school diploma and then proceeded to a law degree at the University of Göttingen in 1971.

2.4 According to the latest statistics, there were altogether 1.4 million apprenticeships in Germany in 2013. Each apprenticeship is estimated to cost the employer around €1,500 (HK\$15,460) per month, including an average monthly training allowance of €795 (HK\$8,190) paid to the apprentice. Yet the business community in Germany generally views the training expense as a sort of investment, as trainees can become the full-time staff of the training companies upon successful certification.

2.5 In 2013, the cost of the apprenticeship borne by the private sector is estimated to be around €23.8 billion (HK\$245 billion), while the public sector contributed another €5.7 billion (HK\$59 billion) in public vocational education. Overall training cost thus amounts to around €29.5 billion (HK\$304 billion) or 1% of GDP in Germany, showing the strong commitment of the business community to vocational training.

3. School-based vocational education and training system and pre-vocational schemes in Germany

3.1 Unlike the dual-track stream, school-based VET stream in Germany is not seen as a unique feature and there is limited discussion on this scheme. By and large, these trainees need to study in the public vocational schools on a full-time basis without any workplace training. School-based training lasts for two to three years and is mostly provided for intermediate-level white-collar occupations in social services such as nurses, kindergarten teachers and medical assistants. Graduates are awarded nationwide certificates. Amongst new VET trainees enumerated at 718 600 in 2013, just about 25% of trainees enrolled in school-based stream, while the majority went to dual-track scheme.

3.2 It is noted that competition for apprenticeships under the dual-track VET is keen and many youths fail to secure any placement. A pre-vocational training scheme is thus put in place to assist unsuccessful applicants, socially disadvantaged, youths with learning difficulties and new migrants with limited command of German language. Pre-vocational training lasts for just one year, comprising internships in companies, introduction of some occupational fields, advanced learning of the first-year curriculum of vocational training, etc. In 2013, there were as many as 257 600 pre-vocational trainees, representing almost one-third of the sum of dual-track and school-based VET trainees.

4. Ingredients for success of dual-track VET scheme

4.1 The dual-track VET in Germany is widely believed to be amongst the best in the world. Its success can be attributable to multiple factors, namely tri-party consensus, legal backing, skill transferability, business incentives and unique training tradition.

Tri-party consensus

4.2 While apprenticeship is regulated by the German government, it makes policy decisions only after obtaining consent from the representatives of both trade unions and employers. The consensus principle ensures smooth implementation of the training programmes throughout the country.

4.3 More specifically on division of labour, the Federal Ministry of Education is responsible for overall VET policy. It coordinates with the respective ministries for training in various occupations. As to the Federal Institute for Vocational Education and Training, it is responsible for setting the criteria and standards for occupations subject to training, in close collaboration with employers and employees.³ It is also tasked with coordinating school curriculum of the dual-track system across federal states and conducting training research. Turning to the regional implementation, the *Länder* (federal states) are responsible for provision of school-based VET, along with employer and employee representatives in the VET committees.

4.4 As regards the role of employers, it is required by law that all companies must be members of their respective business chambers and that they must take an active part in occupational training in their sectors. As such, each employer needs to develop their own workplace training together with their business chambers. Moreover, they need to maintain a high standard of training and prohibit those apprentices failing to meet the occupational standard from practice.

³ The federal government is responsible for laying down National Occupational Standards, which are the agreed level of competency in a particular occupation. The standards are developed through consultation with employers through their respective business chambers.

Legal backing

4.5 The VET system in Germany is underpinned by the *1969 Vocational Training Act* which provides the legal basis for the German government to regulate the various aspects of the VET system. The law covers fine details such as (a) the length of apprentice training, (b) the examinations to be carried out by business chambers to test workplace learning, (c) obligation of employers to release apprentices to undergo these tests, (d) requiring employers and sector representatives to draw up a specification of workplace learning for each occupation, (e) requiring skills and knowledge acquired in workplace training to be transferable across companies. The law and the training regulations help safeguard the interests of trainees.

Skill transferability

4.6 As discussed above, the firm-based training is required by law to be worked out by not just employers but also sector representatives. This avoids a situation that the skills acquired in the workplace training are too company-specific to be applied in other companies. Skill transferability across companies protects the interests of VET trainees, as well as ascertaining a well-trained and reliable manpower source for the entire economy.

4.7 As membership of the examination boards of the state examination includes company representatives, they will monitor the classroom teaching in the vocational schools and the instructors in the companies. This is to ensure that the skills acquired can keep pace with market developments. Moreover, training regulations are frequently updated to tie in with technological and industry developments.

Business incentives

4.8 Business firms are given incentives to participate in apprenticeship. First, the average monthly training allowance of €795 (HK\$8,190) paid to VET apprentices is lower than the market wage by at least 50%, representing savings in labour cost.⁴ Secondly, it is estimated that two-thirds of the training

⁴ Effective from January 2015, minimum wage has been implemented for the first time in Germany, and the wage level is set at €8.50 (HK\$88) per hour. However, employers of VET trainees are exempted from the minimum wage legislation, giving them additional incentives to participate in dual-track VET.

cost can be recovered through the productive work of the trainees over the years. Thirdly, employers are not obliged to hire the apprentices after the end of apprenticeship, giving them more flexibility and longer observation period in making staffing decision.

Unique training tradition

4.9 VET in Germany is essentially an extension of its ancient guild-based apprenticeship. Back to the Middle Ages, guilds of artisans or merchants controlled the practice of their own craft in towns, including training up newcomers. This tradition is then succeeded by employer associations and business chambers in modern Germany. This unique historical and cultural backdrop sometimes makes it difficult for other places to replicate its success.

5. Issues and challenges

5.1 The dual-track VET has been facing new challenges in recent years. First and foremost, it is increasingly difficult for employers to find capable youngsters to fill the apprenticeship positions, partly due to the shrinking size of the young cohorts amidst lower fertility rate in the German society. As an illustration, some 33 000 or 6% apprenticeship places offered by employers were not filled in 2013, and this was around 90% higher than the respective vacancy level in 2009.

5.2 Secondly and reciprocally, some youths in Germany likewise find it difficult to secure an apprenticeship, with the number of unsuccessful applicants rising by 35% over the past four years to reach 21 000 in 2013. Reportedly, the enthusiasm of business firms in VET has receded somewhat lately, amidst the development of a knowledge-based economy. The VET participation ratio of companies thus fell from 24% in 2009 to 21% in 2013. Coupled with the aforementioned unfilled apprenticeships, this suggests a certain extent of mismatch in requirements between employers and applicants in dual-track VET. According to the Federal Institute for Vocational Education and Training, employers have raised the concerns of difficulties in finding competent trainees with necessary skills, knowledge and attitudes. Trainability has become an issue lately.

5.3 Thirdly, there are concerns that the dual-track VET system may not be able to respond to market demand soon enough in the future, as new occupations can be created within a short period of time nowadays. The tri-partite model may be too slow to keep pace with these developments. Moreover, there are concerns that the skills acquired in VET is likely to become obsolete faster in a knowledge-based economy than before, resulting unemployment pressure at an older age.

6. Observations

6.1 Reflecting the success of dual-track VET, the unemployment rate for German youths aged 24 and below was only 7.8% in 2014, just about one-third of the respective figure of 22% for the European Union. It was also the lowest amongst the 28 member states of the European Union.

6.2 The German model suggests that it is of utmost importance to engage all relevant parties in workplace training. Flexibility should also be built into the VET system for attracting the youths and keeping the employers engaged with the apprenticeships. Skills acquired must also be market-driven, broad-based and transferable, so that apprenticeship can become a respectable career path in society.

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